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ABSTRACT

Instead of emphasizing basic skills remediation or academic tutoring, a counseling model can provide a consistent support system, reduce client anxiety levels, and build self-confidence among learning disabled (LD) college students. All of the services offered under this model--(1) academic advisement, (2) personal counseling, (3) career counseling, (4) liason, (5) assessment, (6) work with information processing skills, and (7) monitoring--operate under three assumptions: that clients are their own best resource, that to be effective, questioning must be very specific, and that formal testing should be deemphasized. Use of this model revealed a number of findings, among them that learning disabilities should be seen as a continuum disablement, with more students becoming LD at each succeeding school level, and that counseling and clinical psychology seem to provide the best background for counselors. The program was evaluated through critical incidence, a research method based on counselor observation of clients' progress toward mutually agreed upon goals. The program's success prompted acceptance of the counseling model by the California state college and university system, development of a graduate training program in working with adult LDs, and increased research on the topic. (Project observations, accounts of related research, and new research proposals are appended.) (MM)

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FINAL REPORT

TESTING A MODEL FOR PROMOTING ACADEMIC SUCCESS OF LEARNING DISABLED STUDENTS AT THE UNIVERSITY LEVEL

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February, 1983

Federal Grant # G008101712

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PART I

Model Justification

TESTING A MODEL FOR PROMOTING ACADEMIC SUCCESS OF LEARNING DISABLED STUDENTS AT THE UNIVERSITY LEVEL

Model Justification

This model questions the use of the basic skills remediation and/or the tutorial model as the service delivery model for helping learning disabled students (LDs) at the college level. The definition of the remediation model refers to processing skills such as reading, writing, spelling and math. The tutorial model refers to subject-matter content such as history and literature.

Programs based on these models make several assumptions. Those which seem to be most common include:

(1) The needs of learning disabled students remain essentially the same from elementary school through college.

(2) The most critical need of the learning disabled individual is academic remediation.

(3) Remediation of basic academic skills and/or difficulties in academic content areas is necessary because previous educational experiences failed to take into account the basic deficit(s) in information processing or failed to perform adequate task analysis or both. Remediation is thought of primarily as eliminating or ameliorating deficits.

(4) Learning disabled college students are able to avail themselves of needed services if these services are provided by the college.

Experience with participants in a pilot learning disability program at California State University, Long Beach (CSULB) cast doubt on the assumptions listed above. (See Appendix A).

In regard to (1) above, the cumulative effects of the problems met by learning disabled students surviving elementary and secondary school make a counseling approach a necessity at the college level. Not only do they need a positively reinforced support system consistantly provided, just to maintain, but they need counseling help in reducing their anxiety level and in building their self confidence. Our pilot

project demonstrated that the LDs who survive to the upper division level of a four year college were not identified as LD in elementary or secondary school. They were in all probability a "C" student who seemed to be unmotivated according to teacher and counselor observations.

In regard to (2) and (3) above, the pilot project showed us that the majority of those seeking help initially shied away from the basic academic skills routine. They had had too much failure in the past in regard to remediating specific deficits. They did not see this approach as helpful. They did accept tutoring in academic content areas. However, because so many possessed excellent social coping skills, they got the tutor to do the major part of the task. They penalized themselves in their avoidance behavior.

In regard to the fourth assumption above, we found out it was not true that they could avail themselves of needed services, even when available. They were most hesitant in trying anything new. Failure had been such a frequent consequence in the past that fear predominated. They needed to be taught specific life skills, such as time management, decision-making and stress management, and needed to be carefully monitored in their practice.

Clinicians in a basic skills remediation model or tutors in a subject-content model tend to have a narrow view of their clients because they are focused on weaknesses, not strengths. The two models tend to operate in isolation. The remediation needs to be done within the frame of reference of the LDs total life experiences. Only then will the clinician have the real understanding needed to motivate the student involved.

PART II

The Counseling Model

The Counseling Model

In the original proposal, this model was labeled the Lector Model. This designation never was accepted by the LDs, who insisted that because the core was the counseling process, why not call it the Counseling Model. We acceded to their wishes.

Main functions performed within this model are noted below.

1. Academic Advisement is first priority, because poor selection of courses can lead to probation and being dropped from the university. "Poor" means selection of courses which require skills in which the LD is particularly weak and for which s/he has not developed sufficient compensatory skills and/or prerequisite knowledge. Many LDs will over reach themselves and enroll in courses which are too difficult. Subsequent disengagement can become most complicated, not from the standpoint of the institution, but from the standpoint of dealing with the LD's ego involvement and self-concept.

   Advisement is also needed because LDs frequently continue to enroll in courses taught by an "understanding" instructor, rather than in courses needed for personal goals or institutional requirements.

2. Personal counseling is the foundation upon which the Counseling Model is built. One of the goals of this counseling approach is anxiety reduction. The attempt to bring down anxiety to a more manageable level must be on-going and continuous. The slightest change in any area of the LD's life can make it rise again. Personal counseling may be the only function performed in the first months following identification. Establishing a base of trust, especially for those LDs who have most recently "broken cover," is critically necessary.

Another goal of counseling is that of building self-confidence. Many LDs must receive constant positive reinforcement. In fact, no reinforcement can be interpreted as negative reinforcement. Self-confidence is an essential factor for the success of any kind of remediation.

A third goal is promoting socialization. Many LDs are loners. They have placed a self-imposed exile on themselves in order to hide deficits. In addition, most have become manipulators of others' behavior in order to defend themselves. This can be a good survival technique, but when over utilized with friends, it becomes a technique of alienation. A stable relationship can not be established on such an approach. Trust and mutual support need to be taught.

A fourth goal is the teaching of life skills. Skills such as study skills, goal setting, time management, decision-making, stress management, etc. are sorely needed. The LD needs knowledge and proficiency in these skills in order to adapt more easily to new approaches or avoid pitfalls in regard to personal deficits.

Personal counseling is interpreted here as meaning both individual and group counseling. Group counseling would encourage the building of a necessary support system of like individuals and the sharing of successful adaptive methods.

3. The third function is <u>career counseling</u>. Career goal setting is very important in enhancing motivation to complete college. However, career planning is fraught with pitfalls for LDs because of their own misimpressions of their own abilities and their ignorance of what they can do in the job world. Some have been protected, while others have had experiences only in low level jobs. Self-exploration in terms of values clarification and

personality and interest assessment is a major part of career counseling, together with the integration of these findings with their abilities as they see them and potential abilities as the university sees them. The world of work can be sampled through volunteer programs, part-time jobs, and participation in experiential education. The counselor's constant support of each LD who takes on a new assignment is needed, because such a venture can produce new waves of anxiety.

4. Liaison is the fourth function of the Counseling Model. The needs and characteristics of the LD are interpreted to others-- university faculty, staff, family and possibly employer. The expectations and reactions of these significant persons also are interpreted to the LD. The roles of the counselor tend to be the facilitator of communication and the mediator of agreements. A paramount function of the counselor is referral to other university agencies, so that collective action can be taken to ameliorate identified problems.

5. The fifth function is assessment. Assessment here means both personal and academic. Continuing diagnosis needs to go on in both areas so that the LD is constantly aware of improvement. As in remediation, the LD should be considered as good a source as tests. The use of both internal and external extimates means closer approximation of causal factors.

6. The sixth function is teaching effective information processing skills. Under this title comes both remediation and compensation or adaptation. The student must be helped to understand that compensatory skills and aids are legitimate. An example of adaptation is the use of the tape recorder.

Most LDs are speaker-listeners in a reading-writing environment. The barriers become higher and higher as they progress through college. The use of the slimline tape recorder can be helpful for many LDs because its use can stress their strengths.

7. The final, or seventh function is monitoring. So many times the LD is his/her own worst enemy. In ascending the university ladder where the environment becomes more and more that of reading and writing, deficits which were overcome before now loom like barriers to surmount, and the tools of yesterday are no longer sufficient. For those who have developed a manipulative approach to survive, its use is intensified, because it had proven successful before. Others withdraw even more, intensifying their isolation academically and socially. Their own self-report in regard to assessing the specifics of what is happening cannot be believed, and they have to be confronted again and again to gain a true picture of what is going on in order to establish a mutually agreed-upon plan for action. Then any plan has to be checked through at all referral points to see if action is being taken.

PART III

Operating Assumptions

Operating Assumptions

There are several basic assumptions we have made in our approach to these adult LDs. The first is that they are their own best resource in finding out ways to help ameliorate their disabilities. However, the counselor must be well enough versed in learning disabilities to be aware of cues and how to pursue them. A verbal cue that can signify that the counselor is on target is the client expression, "But no one has asked me that question before !" This questioning but supportive approach goes on in every counseling contact. It is a form of continuing diagnosis. The adult can recall, describe, analyze etc., and these capabilities, if properly utilized by the counselor can be most helpful in discussing adaptive approaches and planning outflanking strategies instead of the usual frustrating frontal attack. This assumption of the LD being his/her own best resource has also paid off in uncovering possible areas not heretofore explained. Scotopic sensitivity (See Appendix C) is the chief one so far. However, the audio channel is being explored and preliminary data indicates areas which have not been previously examined.

A corollary of the assumption above is that the questioning needs to be very specific. This specificity approach has helped bring about some of the contributions mentioned above. For example, the interview schedule developed to investigate the condition of scotopic sensitivity more fully has grown from 20 items to 90 items through eight revisions. Lack of specific questioning is shown in the case of a 41 year old woman, who said she had mentioned the floaters she had in her eyes many times to her optometrist when she had her eyes examined. His answer each time was that many people have floaters. The crucial point here was the frequency of the floaters. They were so frequent and distracting that the client had great trouble seeing letters and words.

Another corollary of the client being his/her own best resource, and tied into the specific questioning approach mentioned above, is the deemphasis on formal testing. Many of the instruments being used have been developed for children of elementary school age. The assumption is that there is direct transferability

with some adjustment for norms. We find that these tests do not fit the adult LD because their approach is too generalized. However, utilizing sub-tests in a clinical manner can be helpful because a more specific application is being pursued. The specific questioning approach combined with various sub-tests seems to give a true diagnostic picture.

PART IV

Some Things We Learned

Some Things We Learned

One of the results of the project has been the very positive client reaction to the support system. They claim that this has helped them hold on to their academic goals in spite of all the obstacles. Our oldest client, a 43 year old woman, expressed it simply with, "The program has given me hope!" A very important point, which took considerable time for us to fully realize because of the innumerable evasive tactics of our clients, is that recognizing one's general problem intellectually does not mean recognition emotionally. And the latter has to develop to a certain point before sincere, positive action can be taken. Coupled with this is the time this process might take. We have had those who accomplished some acceptance in two months and others who have taken up to 1 1/2 years. The group counseling sessions play an important role here. The need for acceptance in order to bring about systematic action in the LD is similar to the treatment of those who have problems with substance abuse. Perhaps there are some techniques we can learn from this area.

A realization that has emerged from this study is the need to conceptualize learning disabilities as a continuum disablement where more and more students become LD as each succeeding school level is looked at. In this discussion we need to remember we are focusing on processing skills, not these higher level ones which might be more easily attributed to intelligence. This concept of continuum disablement can best be pointed out in terms of what level of education were our survivors indentified? Two of the 20 participating in the project were identified at elementary school level. None were identified at secondary level, two at community college level, and one at another four year institution. This does not mean that our LDs did not have problems academically. All of them did in some way, but the level of severity of their problems was not great enough for them to be referred for special education help. Their coping skills were proficient enough to get by the lower level educational barriers. For example, 12 of the 20 attended a community college before applying for entrance to a four year college.

Most of these would have had a difficult time with the ACT or SAT. And they knew it!

Another realization which emerged from this project was the layer effect of learning disabilities. For example, when visual defects were corrected so that greater speed and comprehension could be attained in reading, it was found that serious audio problems existed in several LDs. This was especially crucial because they had been using their audio modality in a compensatory sense to make up for their visual problems. Most of the LDs in the program are speaker-listeners in terms of learning style rather than reader-writers, therefore finding defects in the area of strength greatly increased client anxiety.

The counseling support system continually proved its worth by providing the anchor of stability to the umpteenth discussion of "Why am I so dumb?", and helped reduce the fears causing the anxiety attack. This continuing integration of counseling and remediation is crucial. Having someone who can consult, morning or night seems to make the anxiety attacks manageable. The counselor doesn't even have to be immediately available. The promise seems to help. An answering machine was obtained for the office phone so that this promise could be kept in terms of a call back as soon as someone was available.

Another aspect of this integration of counseling and remediation is helping the LD learn more about his/her problems so that in clarifying details s/he can implement improvements him/herself. This constant discovery of aspects of self can be scary, and the counseling support to integrate these discoveries into one's self-image is a continuing one.

An additional note concerns the sex make-up of the 20. There were six males and 14 females. This predominance of females has held steady since the pilot program began in 1980. This is an area of study in itself. Why the reverse proportion as compared with the schools?

Another lesson learned was guaging the professional sophistication of the graduate assistants who operated in the counselor roles. Our initial recruiting

was done through special education, reading, school psychology and counseling. What we found out within two months after the grant began was what we wished we had were post-doctoral people with training in counseling or clinical psychology. Because our clients "broke cover" in crisis situations, they could be difficult counseling cases. Once they had some trust in the ALDP counselor, they would not take referral to the CSULB Counseling Center under any circumstances. No matter how rational the argument for referral, the client would not go through with it because of his/her anxiety level at the time.

We found that even mature graduate students in terms of age and experience (30's - 40's) needed constant support through consultation to deal with ALDP clients. Only two counselors who already had one year's experience were assigned up to six clients, and beginners could only manage two. And still our fatality rate was 50% for the latter.

To try to overcome these problems in regard to 1982 - 83, we required potential graduate assistants to take the graduate class in post-secondary learning disabilities where we had a chance to look at them and they had a chance to test out the water. Our record for fall, 1982 was much better. We now look for as much counseling experience with adults as we can get in recruiting counselors. The setting does not necessarily matter, but experience with substance abuse cases, hot line clients, half-way houses etc. seems to give a perspective which is necessary for the counselor to survive ALDP clients. We also are actively recruiting those who are building up their clinical hours for the Marriage, Family Child Counselor license. They usually have all their course work done except thesis, and see the ALDP experience as a unique, useful one.

We also are formulating arrangements where the ALDP counselors will have their own group led by a clinical psychologist from the counseling center. Consultation is not enough. Counseling for the counselors can definitely benefit the ALDP.

An additional lesson learned concerned the process of screening. Since

our diagnostic process is largely verbal, we could be open to accusation that we probably take anyone who has an academic complaint. On the contrary, we accept only 50% of those we screen, and our referrals tend to come from trained individuals. Our two best sources are the Director of the Disabled Student Services and the professional staff of the Learning Assistance Center. They are attuned to the type of individual we will take. We may get referral from faculty members and students themselves, but our ratio of acceptance drops accordingly. We look for the deficits to be in processing skills, and know the questions to ask to find out. The student may remark "but how did you know?" There are commonalities yet even these can be individualized when more specific questions are asked.

From a dissemination standpoint, several approaches were tried. Two meetings were held in the spring of 1982. (See Appendix E). The first attracted 18 people and the second, 53. Schools, hospitals, rehabilitation agencies, community agencies etc. were represented. We found that the presentations couldn't merely be what we were doing within the counseling model, but "what were adult LDs like" had to become a major part of the program. From these contacts, there have been several community colleges who have expressed interest in becoming more fully involved. One especially, Oxnard Community College, has become interested in scotopic sensitivity. After we trained the learning disability specialist in screening procedures she found much the same results as we have at CSULB in terms of scotopic sensitivity in her identified LD population.

The Counseling Model has met with some opposition from some community colleges because the state wide system under its chancellor's office is involved in a study to standardize procedures of identification and treatment of LDs. Their present assumptions are based on the diagnostic-remediation model with only referral for help if emotional conditions demand it. Since the Counseling Model emphasizes the latter rather than the former at least until emotional acceptance by the LD is established, one can see the potential for disagreement. We hope our educational

efforts will bear fruit in bridging misunderstandings we now have.

The students in the ALDP tend not to believe the director when he tells them that the staff is learning much more from the experience than they are. May it ever be so!

PART V

Evaluation

Evaluation of Program

Introduction

Twenty students were in the program during the 1981-82 school year--six males and fourteen females. There were 14 for the full school year and six for a partial school year.

Next steps for students at end of 1981-82:

Continued for 1982-83 (Undergraduate)	10
Graduated	2
Took leave	2
Dropped out	2
Academic failure	1
Continued for 1982-83 (Graduate Level)	3
Total	20

The diverse nature of learning disabilities and their even more diverse impact on an individual's self-concept, makes any summary such as this study demands, a very difficult one. To keep the necessary individual flavor, yet tease out the commonalities, a method of research called critical incidence was employed. This has been developed by John Flanagan, President of the American Institutes for Research in Palo Alto, California. Change is recorded through oral descriptions of the clients as recorded by their counselors. (See Appendix B for samples). This is made possible by the accountability approach used with the counselors where mutual goals were set by the counselor and client, and reviewed at the end of the year (May, 1982). These objectives were set within the framework of five of the main functions of the Counseling Model--academic advising, career counseling, personal counseling, information processing skills and assessment.

For more of a personal feel of the student population, brief descriptions are given followed by generalized then specific outcomes in regard to the study.

Student A (Spring semester)

Woman, age 41, four year graduate. High anxiety in regard to examinations, papers etc. Can be crippling. Since discovery of scotopic sensitivity, has worked on applying her improved visual status to reading and writing. There is progress but it is slow.

Student B (Full year)

Woman, age 24, community college transfer. Numerous social, emotional and academic difficulties. Some positive movement on all objectives but continued on probation Spring '82. Off probation Fall '82. Held part-time campus job. Improvement in self-concept and reduction of unique social behavior, but counseling support system is crucial for any further gain.

Student C (Full year)

Man, age 25, community college transfer. Academically self-destructive, high anxiety, avoidance behavior, poor self image, defensive. Some progress in several areas but very resistant to help generally. Held part-time retail sales position. On probation during year. Dropped by CSULB, May '82. Attempted another university in another state Fall '82 on probationary status. Dropped at end of Fall '82 by university action.

Student D (Full year - from pilot program)

Woman, age 22, community college and four year transfer. Extreme auditory perception problems. 1-1/2 years to emotionally accept problem and begin systematic positive action. Socially an excellent manipulator. Positive movement on all objectives but avoidance behavior tended to negate general improvement. Held part-time dance instructorship in a city recreation program. On probation. Left after Fall '82 to continue classes in acting.

Student E (Full year)

Woman, age 40, community college transfer. The "dumb" member of a "smart" family. Dependent personality had led to many problems. Progress in all areas to point of not needing program support. End of Spring '82 had 3.56 grade point average. Vocational

education teacher in home economic areas.

Student F (Full year - from pilot program)

Woman, age 36, community college transfer. Multiple physical problems including visual, hearing, endocrine, neurological etc. Has made very positive progress in all objectives and other areas such as assertion. She constantly must battle the health problem. Has been working as an aide in a rehabilitation center. Generally gone from C's to B's in grades. Majoring in human development, including gerontology certificate.

Student G (Half year only--from pilot program)

Male, age 20, direct entrance to CSULB. Family problems plus writing problems. Improved understanding of self and interaction with others. Some gain in academic skills. Worked half-time as bank teller. Left at end of Fall '81 to return to mother's home in the East. Planning to return, Fall '83.

Student H (Full year--from pilot program)

Woman, age 32, transfer from community college. Problems in visual and audio modalities with accompanying emotional connotations. Poor in reading, writing and spelling. Talented in art. Graduated Spring '81 with 3.56 grade point average. Graduate level now in art. Greatly enhanced self-image. Counseling support system still crucial.

Student I (Full Year--from pilot program)

Man, age 24, community college transfer. Extreme language problems in past. Diagnosed autistic, aphasic, cleft palate etc. in younger years. Private school till high school level. Majoring in drafting within industrial arts--strength in distance running including 240th in Boston Marathon. Several support groups past and present, and his determination have made this miracle possible.

Student J (Full year)

Woman, age 30, community college transfer. Post-trauma client. Had stroke at age of 19. Developed learning problems especially in writing etc. after stroke. Also has developed lupus. Greatly enhanced self-image, physically and emotionally. Industrial arts major--auto mechanics. Graduates Spring '83.

Student K (Full year--from pilot program)

Woman, age 43, community college transfer. Graduated in Spring '81 with 3.64 grade point average. Visual problems, physical and perceptual. Reading, writing, spelling problems. Graduate level in elementary teaching. Tremendous energy output--constantly planning strategies to remain hidden. This is an indomitable woman.

Student L (Full year)

Woman, age 23, four year college transfer. Graduated in psychology Spring '82 with a 3.22 grade point average. In addition to visual and audio problems, she has some central language dysfunction problems. These affected reading, writing and spelling. Greatly enhanced self-image. Improvement in reading and writing.

Student M (Spring semester)

Woman, age 23, four year college transfer. Admitted on probation to University of Colorado because of test score. Dropped at end of first term. Outstanding high school student. Visual and audio problems affecting reading, writing and spelling. Gain in academic skills and in self-image.

Student N (One semester)

Man, age 21, four year transfer. Visual problems affecting reading, writing and spelling. Very good progress in reading, some progress in writing and spelling. Speaker-listener skills are excellent--use of dictation and tape recorder a help in writing. Graduation in Spring '83 in recreation appears a reality.

Student O (Full year)

Woman, age 21, community college transfer. Left school Spring '82 because she saw career goals at community college rather than four year college. Had own business. Family and personal problems. Visual and auditory problems affecting reading, writing and spelling. Not much gain made on the latter. Increased self awareness and increased knowledge of social interaction.

Student P (One semester)

Woman, age 32, four year graduate. Tested out gifted in elementary school. Visual problems affecting reading, writing and spelling. Many emotional problems emerging from great gulf between ability and proficiency in processing skills. Semester gave a greatly enhanced self-image--along with improvement in social emotional and academic life.

Student Q (Full year--from pilot program)

Man, age 23, community college transfer. Graduated Spring '82 in photo-journalism. Most severe problem was in writing and spelling. Extreme anxiety arose in regard to such assignments. Enhanced self concept. Improvement in term and research papers.

Student R (One semester)

Woman, age 23, began CSULB directly. Visual perception problems and auditory physical and perception problems affecting reading and writing. Improved academic and social skills. Major in nursing--extensive reading demanded.

Student S (Full year)

Woman, age 48, community college transfer. Majoring in art but problems with visual perception affecting reading and writing. Enhanced self concept. Improvement in processing skills related courses such as art history.

Student T (Full year - from pilot program)

Man, 28, community college transfer. Has definite problems in reading, writing and spelling stemming from visual problems. Is only now facing the need to take academic courses if he is ever going to graduate. Has piled up allowable PE courses to get a 2.63 grade point average (43 units). Greatly enhanced self-image--beginning systematic work on basics.

Generalized Outcomes

The generalized outcomes are discussed as they were stated in the grant proposal.

1. Each disabled student will be able to perform in regularly scheduled classes more in accordance with his/her potential (achieve a "C" average or higher).

Of the 20 students in ALDP in the college year, 1981-82, 18 fulfilled the "C" average criterion. Of the two who did not, one was dropped by the university for academic failure and the other was continued on probation. Even the ones who chose to drop out of the program for various but very legitimate reasons had maintained a "C" average or above. The cumulative GPA's at CSULB ranged from 2.1 to 3.64. Actually, two of the three graduate students held honors, B+, when they graduated from CSULB in May, 1981. The one who had a 3.56 majored in art and the one who had a 3.64 majored in liberal studies.

2. Each disabled student will demonstrate academic longevity comparable to his/her non-disabled peers.

To prove this in only one year is difficult. However, the group of 20 with two drop-outs, one failure, and two graduating, remains above university norms in retention rate.

3. The disabled students will successfully meet requirements for graduation percentages comparable to the non-disabled population.

Again, this is difficult to prove in one year's time. It should really be three or four years, especially since LDs are encouraged to take reduced loads because of the additional time needed to accomplish the same tasks. However, with two graduating in 1982, three planning on graduation in 1983, and five planning on graduation in 1984, this would give 50% of the original 20 in a period of three years. This record is above average for the university.

Specific Outcomes

Outcomes in terms of each of the main functions of the model follow. Included in the outcome information are stage scales. As one reads from left to right, one can see that improvement takes place in terms of that particular scale. It should be remembered that these scales are directional only and are not precise. They indicate movement, not definite points of accomplishment. In addition, one might find a student recorded under several stages. Take B for example under #1. Her designation means that she exhibits behavior under all three of these stages, and the one she chooses depends upon the particular situation she faces. This means that there are critical incidents noted at all three stages. An example of a critical incident can be found in Appendix B.

It might be noted that Stage 1 tends to be described with words like avoidance etc. This can take many forms and lurks just underneath the surface for all LDs. A situation which seems overwhelming and raises the anxiety level has a good chance of helping the escape reaction surface. Handling this reaction in a more rational way is one of the goals in every counselor-LD relationship.

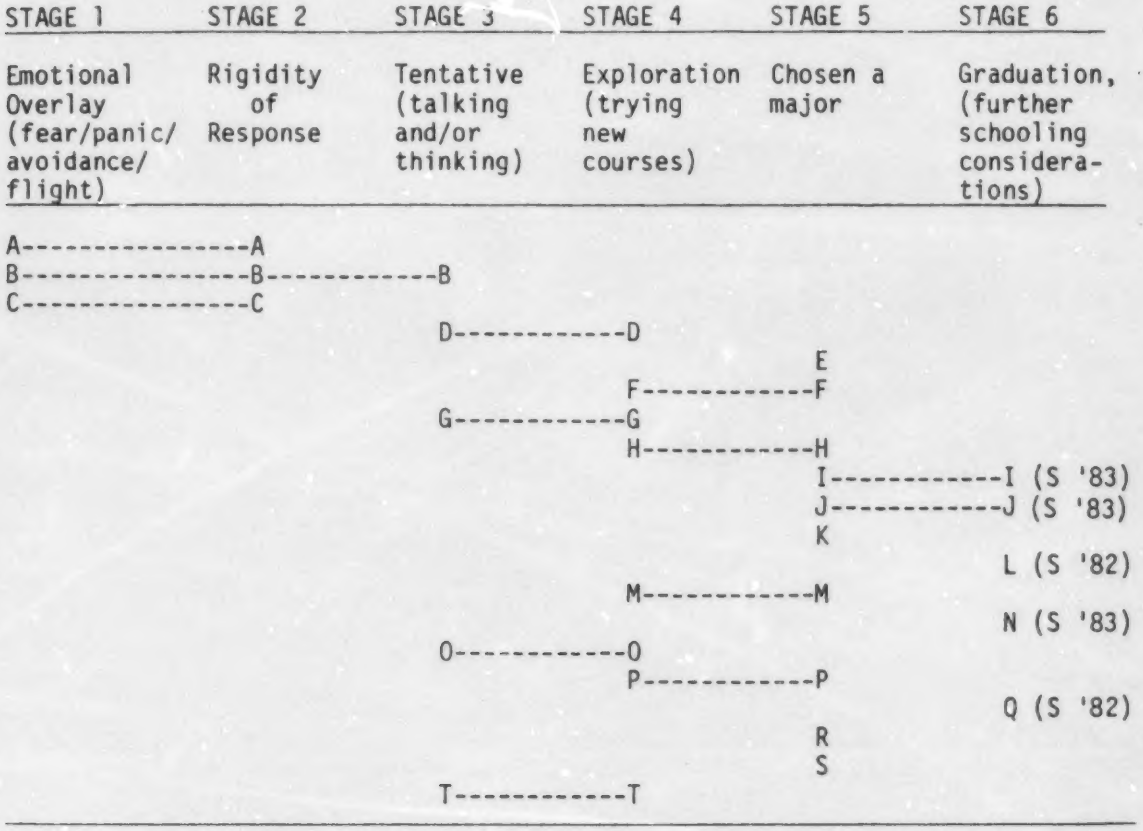
Stage 2 usually reads rigidity of response. This again can take many forms, but generally it is a reaction the LD has found to be successful at one time, but no longer is. However, s/he holds on to that reaction with great tenacity, in spite of all the evidence that it is no longer suitable. One example is a student who has great difficulty with lectures. He could handle classroom discussions in high school because he was a frequent participant and was reinforced through interaction with others in terms of content learning. Also, frequent quizzes helped in that he did not have to carry details over a long period of time. However, in a university lecture course he's fumbling because he can't handle listening and notes. There are only two tests and the final, and the instructor emphasizes his lectures rather than the text. In spite of this, the student refuses to consider a tape recorder because "I was able to handle this

alright in high school." His rigidity has led to an "F" in the first test, and he may flunk the course because he fears any change of approach more than the specter of an "F".

The rest of the stages in the various scales tend to be self-explanatory.

1. Academic Advisement

Students will plan and maintain an educational program which can lead to graduation within an agreed upon time frame.



Thirteen of the 20 had their major chosen and/or graduation designated. It's difficult teaching LDs that among the many choices they have in college, whether in general education, electives or major, they can find courses more in tune with their strengths. Those who are at "I want to be like everybody else" stage are even more difficult to teach because they want to prove "there's really nothing wrong with me." Educational planning in terms of manageable courses is crucial if the LD is going to survive academically.

2. Career Counseling

Students will select career goals which are attainable.

STAGE 1	STAGE 2	STAGE 3	STAGE 4	STAGE 5
Emotional Overlay (fear/panic/ avoidance/ flight)	Rigidity of Response	Tentative (talking and/or thinking about it)	Exploration	Career Goal or goals are chosen

Ten students had chosen goals by the end of the year. The career goals were attainable for all ten because they were juniors and seniors and they had had the chance of testing the goal through taking courses in the major. They received career help in several ways beyond the ALDP. One was the course in Personal and Career Explorations; another was career counseling through the Educational Psychology Clinic where the service is offered by graduate students learning career counseling; and still another was registering with the office of Career Planning and Placement on campus.

Thirteen students held full or part-time jobs while attending school during the year. These ranged from jobs on campus to bank teller to retail clerk to recreation aide to rehabilitation aide to waitress to entrepreneur to photographer to vocational education teacher to elementary school teacher.

3. Information Processing Skills

Students will make progress in removing academic skill deficits.

STAGE 1	STAGE 2	STAGE 3	STAGE 4	STAGE 5
Emotional Overlay (fear/panic/ avoidance/ flight)	Rigidity of Response	Some negotiation, compensation, remediation with much counselor intercession & help	Increasing independence with some counselor help	Independence to extent of personal diagnosis and carrying out of solutions with occasional counselor help

The help counselors gave ranged considerably such as helping line up tutors, teaching study skills, monitoring time management, teaching writing skills etc. Some students used computer programs such as Plato to improve knowledge of grammar and better organization in writing. Spelling came in for its share also.

Accompanying the actual work with skills was learning how to employ compensatory approaches. Probably the ones focused on most were the varied uses of the tape recorder, especially to organize one's thoughts for writing up an assignment; the negotiating for more time in terms of tests; and requesting permission to take oral exams. Three initially failed the Graduate Writing Proficiency Examination but passed it when given part of the options above. The grades speak for the success of their efforts.

4. Assessment

Treating the condition of scotopic sensitivity will help improve reading comprehension.

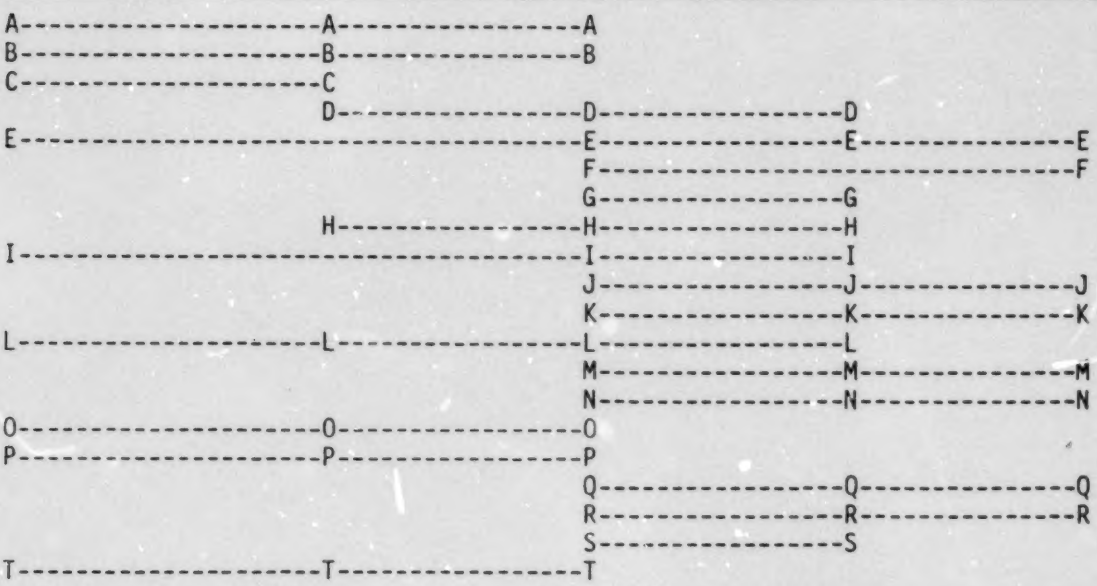
STAGE 1	STAGE 2	STAGE 3	STAGE 4
Confirmation of Scotopic Sensitivity	Some use of overlays or glasses to improve reading. Personal resistance still evident	Have glasses--evidence of applying correction in a number of ways	Independent in application methods

Although other assessment was done including intelligence, reading, spelling tests etc., the main assessment procedure that brought the greatest gain to the largest number, was treating scotopic sensitivity (see Appendix C). Three of the 20 did not have the condition at all, 12 did and followed through on overlays and/or glasses, and five did but for various reasons dragged their feet in terms of putting the information to work. The 12 who have gotten the tinted glasses and have worked at putting them to use, report much less fatigue, greater time span possible for one reading period (from 10-15 minutes to one hour or more), greater comprehension (can grasp material in one to two readings rather than four to five) and increased speed (up to 50%). The "reluctant" ones have not followed through largely because they are afraid of change--even if that change can make things easier for them. Anxiety plays an important part here.

5. Personal Counseling

Students will develop improved decision making skills.

STAGE 1	STAGE 2	STAGE 3	STAGE 4	STAGE 5
Child-like response; impulsive; passive behavior; acting out	Rigidity of response	Consider options and/or values	Gather information about options	Makes decisions based on information & probability of outcome



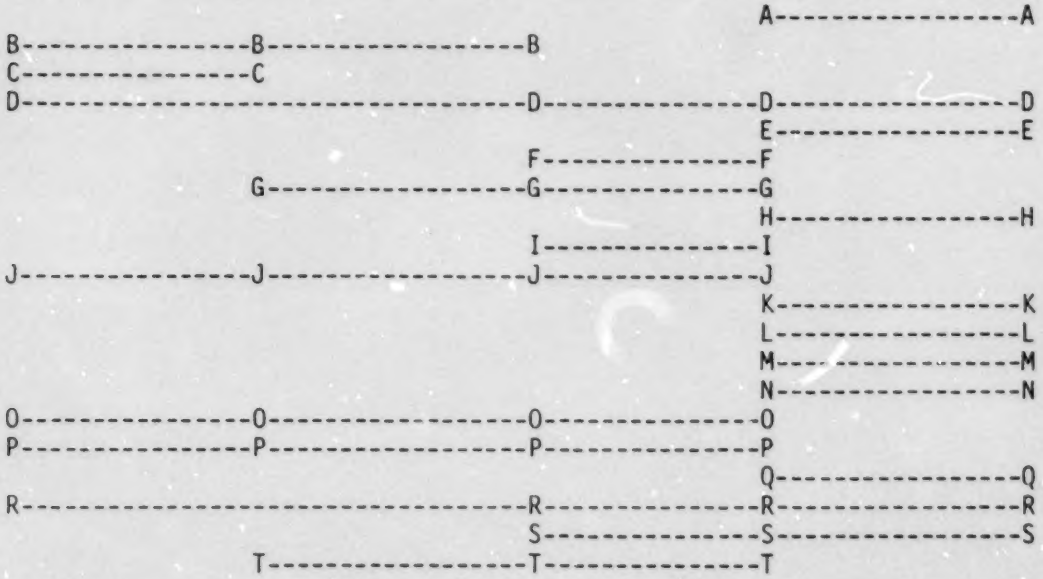
Decision making was chosen upon which to focus within the context of personal counseling because it is so poorly handled by these LDs. In spite of a year's work by the counselors in most cases, the reader might note the span of three stages for many of the students. The decision making style of so many is still so inconsistent. The ingredient which contributes heavily to the instability is the free-floating anxiety most of these LDs carry. It can contribute to the impulsivity of decisions with resulting negative consequences.

Goal setting and planning ahead were very much a part of this objective. They are the tools to manage the anxiety. Many positive decisions were made, usually of the shorter term variety. More time than one year is needed to work through this most crucial of personal skills.

6. Personal Counseling

Participants will manifest improved social skills in new situations.

STAGE 1	STAGE 2	STAGE 3	STAGE 4	STAGE 5
Emotional overlay/ avoidance/ high anxiety	Rigidity of response	Enter group situations with considerable counselor support	Conflict resolution with help	Conflict resolution on own. Initiating own contacts



The comment has been made before that so many LDs are loners because of their history of hiding their disabilities. It shows on the above scale where nine still find some types of social situations hard to handle and revert to avoidance or stereotyped behavior such as hanging on to some social behavior which may work in some situations but prove unacceptable in others.

The counselors worked on this problem individually through specific discussions and role-playing situations. The social aspects of many situations were covered in the groups, and several social gatherings were held including a picnic, a beer and pizza lunch celebrating the end of the semester, folk-dancing etc. to give practice to the teachings. The counselors attended and provided the necessary support.

One very positive gathering was encouraging the students to invite "significant others," where the ALDP was explained along with simulated learning situations from the standpoint of an LD, etc. Over 30 people attended and the resultant intermingling of university and community support groups generated additional feelings among the LDs of being understood.

It should be noted that eleven were largely on their own. The part-time and full-time jobs held by members of the group attest to their abilities to adjust enough to the outside world to survive financially.

Liaison

Although we did not meet our self-imposed quota of contacting 50 faculty members, we did conference with around 30. Our overall impression was how co-operative the faculty was. There were a few of the type who thought if they can't meet standards (my way of teaching) why are they here. But 90% when approached were willing to make accommodations. The oral test was one of the most commonly requested adaptations along with more time on tests. The success of LDs once some adaptation took place pleased the instructors.

Extensive use was also made of subject matter tutors, and this was usually coordinated by the ALDP counselor. These tutors were paid for by funds from the Office of Disabled Student Services and/or California Department of Rehabilitation.

Other on-campus referral sources were used also including the University Counseling Center, Career Planning and Placement, Financial Aid, the University Health Service, Learning Assistance Center etc. Outside referral sources included optometrists, hearing specialists, Orange County Rehabilitation Center etc.

The liaison function of the counselors is a very important one, because LDs do not follow through on referrals. An important reason for this behavior is that there is a past history of such referrals not working out--so why try again? The chance to refer has certainly helped make the ALDP a much more responsive and flexible program.

Monitoring

Monitoring time did not get reduced to the extent we thought it might. The avoidance syndrome is well ingrained in the LDs, and follow-through becomes a very hard character trait to accomplish. Each student has two hours of individual counselor contact and some have group contact for 1-1/2 hours per week also. This does not mean that a schedule of two hours was kept every week--it might be less but when mid-terms loomed, the contacts could become more frequent, and perhaps longer.

The caring, trusting aspects of the ALDP also contributed to additional counseling time because of the layered nature of learning disabilities. As some things are remedied, background problems come forward, and the students felt comfortable enough to bring these into the discussion stage.

Finally, contacts were not just made in person. Phone calls to counselors at school and at home were frequent. Defusing anxiety attacks before they crippled was ongoing for most of the counselors and their clients. The office answering machine was mentioned above. The promise of a reply was enough to help maintain in a number of circumstances.

Evaluation Postscript

The subtleties of a program of help such as has been discussed here are difficult to describe. They need to be felt. The overall reaction of the students involved is so very positive. The nurturing nature of the ALDP establishes a safe haven on campus where an LD can be candid about her/his problems. Yet it serves as a springboard to dive back into the fray, to successfully battle for an enhanced self-image.

PART VI

Summary of Semester Extension, Fall 1983

Summary of Semester Extension, Fall 1983

The grant extension ended November 30, 1982 and the fall semester ended only three weeks later. Therefore, a general discussion of that semester is given, because some things were implemented which had been learned from the main grant year of 1981 - 82.

There were 13 continuing and 12 new students. Of this total of 25, there were 17 females. For the first time there were five freshmen, three males and two females. Three of the five were special admit students. This means that they showed promise but did not meet regular admission requirements. A small number of students, two to three percent, can be admitted to the university on this basis.

The freshmen tend to bring an added challenge. Not only are learning disabilities present but identity crises typical of this age level in our society are also present. They tend to compound the issues, especially when the freshman has not emotionally accepted his/her learning disabilities but only cognitively recognizes them as transitory.

For example in one case, a freshman's identity crisis is his "battle" for independence from mother, and his idea of freedom is to flunk out of school in order to be able to move out of his home. His GPA was one of the two below a "C" average for fall semester. An example of non-acceptance is a freshman's taking too difficult a load in line with a most difficult career objective, and the resultant poor grades compounded with his feelings about his parents.

Our two groups which meet weekly are progressing much better from the lessons learned during the grant year. Those students who emotionally accept their disability are assigned to Group A while those who have not to Group B. We found that this is absolutely necessary to free the Group A members to

seek ways to compensate and remediate, while the Group B members are still engrossed in convincing themselves that nothing is really wrong. Progress has been much greater for both groups, and as a student starts emotionally accepting his/her disability, s/he can transfer from B to A.

Another means of giving structure to the program has been enrolling the students in a course titled Personal and Career Explorations. The course requirements are fullfilled through their individual counseling sessions, their group counseling sessions, and their educational and career planning sessions. This has helped in structuring regular meeting times, it has helped in the establishment and development of personal logs tracing changes resulting from treatment, and it has contributed financially through three units for each students.

An additional feature geared to the graduate student counselors, but affecting the LDs, has been initiating a requirement for each counselor to develop a case study on one of his/her LDs. This is an academic requirement, and is fulfilled through being signed up for independent study with the director. A paucity of such case studies exists in the literature on adult LDs and the search for possible developmental commonalities could be crucial in seeking preventive measures.

PART VII

Next Steps Generated By This Grant

Next Steps Generated By This Grant

There are three leading next steps and several secondary ones which have emerged from the grant.

First, the intent of the grant to provide seed money to prove the efficacy of the model has nourished a positive response from Disabled Students Services (DSS) at CSULB. This office has taken over the cost of offering the services outlined in the model to the financial extent of over $50,000 for the college year,1982-83. This amount contrasts with its $15,000 commitment during the grant duration. This counseling model has become the LD model program for the California State College and University System of 19 campuses as supported by the system wide advisory committee on disabled students. Whether the unique cooperative arrangement which exists at CSULB to carry out this program will be copied by other campuses is still problematical. At CSULB the Disabled Student Services shoulders the financial end in terms of the salary of the learning disability specialist, counselors, clerical staff, clerical supplies etc., and the School of Education furnishes space, time of the director, and an academic atmosphere of training and research, which complements the service function of the DSS office. This mutual arrangement has so far proved beneficial to both parties.

A second major step which has emerged has been the beginning of a graduate training program for those interested in working with adult LDs. The first course was offered in the summer of 1982 and is being repeated in the spring and summer of 1983. (See Appendix E). In addition a one week workshop is being offered in July, 1983 to acquaint elementary and secondary personnel working with LDs some of the knowledge they can use in their settings which has been gained from working with the adults. Class members have come from many adult settings, and individual discovery of personal learning disabilities has been dramatic for some participants, perhaps even more important than the professional knowledge and application.

A third major activity has been research. To provide a research base, diagnostic interviews with students have been video-taped. This provides a record for further analysis and interpretation of the specificity approach described above. However, the main research focus has been examining the students referred to the ALDP program for scotopic sensitivity, correcting the condition, and following up on what changes it might have brought about. Several research proposals to identify the evidence of scotopic sensitivity in identified LD populations have been written. One, directed to the National Institute for Handicapped Research to investigate incidence among community college LDs has not been funded. A masters thesis dealing with this same subject and population is now being carried out. The other research proposal deals with incidence in a pre-delinquent population quartered in a boarding home in Long Beach. Funding is still unknown.

The incidence of scotopic sensitivity in students at the secondary level and elementary level is also of great interest. One school system has expressed interest in cooperating in terms of its high school population, both identified and non-identified LDs. A pilot study has been carried out as part of screening procedures for intake to the Educational Psychology Clinic of which the ALDP is a part. Thirty-eight youngsters, ages 8-16, were screened with 17 showing indications of scotopic sensitivity and warranting further investigation. Since youngsters cannot necessarily be used as their own best resource, more subtle approaches need to be taken such as actual demonstration of this visual dysfunction. This pilot study is attempting to develop procedures that can be used in a masters thesis focusing on actual incidence.

See Appendix D which notes some possible research directions dealing with scotopic sensitivity.

An area of research just opening up, but again generated by the grant, relates to specific audio breakdowns. These do not show up on regular audiologi-

cal examinations. There seems to be inconsistent high-frequency loss. It can acutely affect an LD in lecture situations. Background noise, where seated, the frequency the instructor turns away from class etc. can contribute to loss of information for some LDs. Because of their need to concentrate so intensely, they may also produce poor notes. A tape recorder may not be helpful because they cannot correct their ommissions. The inconsistent input pattern still holds. There were four of the twenty students in the project who are seriously affected by this type of problem.

Instrumentation which seems to help is called Phonic Ears and is used with the deaf and hard of hearing. The affected students have marveled at the clarity of speech which comes through using this instrument, both in the classroom and personally.

Research in the audio area is wide open. We do not as yet have systematic screening procedures or remediation procedures. The possibilities, however, sound challenging.

This one year project has been a period of intense learning for the director and his staff. What "answers" we seem to be discovering tend to produce a cluster of additional questions. An overall counseling approach seems to be somewhat solidified, at least in our opinion, but the many details are open to research for years to come.

PART VIII

Appendices

Reflections on a First Year of a Pilot Program for Learning Disability Adults

R. J. Swan
The Journal for Special Educators, 18/3, 1982.

In the fall of 1979 the Educational Psychology Clinic, which is part of the School of Education at CSULB, began the first year of a pilot project working with learning disability adults. Adult is defined here as 18+. The pilot is being continued with the staff constantly learning more than any participant.

The reflections are admittedly generalizations which hopefully can be developed into working hypotheses in the treatment of these adults. We are talking about a dozen individuals at this point, four women and eight men, with an average age of 26, ranging from 21 to 33.

The term adult is being used because we are working with some people from the community as well as students from CSULB. These learning disability adults have already proven their above average intelligence through previous college work or by university admission. However, a marked discrepancy exists between their inherent potential and their academic performance. Generally, learning disabilities may manifest themselves in skill deficits in listening, thinking, speaking, reading, writing, spelling, language processing and doing mathematical calculations. The learning disability adult as defined here is not the visually, aurally or physically disabled student or the adult having problems with language because English is a foreign tongue. However, learning disabilities could be part of the etiology of individual cases in the above categories and we will consider them for remediation only if the learning disabilities are dominant.

An overriding problem with learning disability individuals is the individualized nature of the disabilities. Every person has a unique set and attempts to categorize and prescribe if not thoroughly done can lead to more problems rather than fewer.

The learning disability adults we are working with tend to be individuals with the personal learning style of the speaker-listener. However, the university emphasizes the format of the personal learning style of the reader-writer. I agree there are lectures but one must take notes to remember the knowledge imparted. Taking notes for many speaker-listener students means interfering with their actual reception and grasp of the content put forward. In addition, their learning style does not especially help them in objective or essay exams.

There are five main functions of the program--assessment, remediation, counseling, intervention and coordination. In approaching adults with learning disabilities I do not see any of the functions being left out but the emphasis would depend upon the individual case.

Assessment, as used here, means the continuing diagnostic approach where working hypotheses are constantly constructed, not only in the area of the disabilities themselves, but in the adult's reaction to them. The adult is the best source in regard to his/her learning problems. The clinician needs to think of the relationship as that of a team with contributions fully valued from either participant. Clinicians with experience working with younger people tend to have a harder time

adjusting to the team approach because of their reliance on assessment instruments and their concept that the clinician alone provides the working stucture.

Remediation does not consist of only focusing on identified weaknesses, but the bringing forth of cues by adult and clinician which can produce new connections and new approaches. The experiential background of the adult can furnish the basis of the continuing process of self discovery. However, it is the learning coordinator who is the catalyst in the discovery process. A deficit may be so extreme that many years of remediation have not resulted in sufficient progress to cope with the demand of certain college classes. Therefore, adaptation or accomodation needs to be carefully considered.

Education seems to have some hangups in regard to a general approach to adaptation. We tend to see ourselves as the omnipotent teacher and the lowly learner. However, our concern for the learner is great, and we expend our energies trying to shore up the learner's weaknesses. This process usually follows the regular or most accepted channels and all the learner has to do is concentrate more, spend more time on it etc. An example of this is the grade level syndrome with which we are afflicted in education. If we can get him/her to grade level, they will live happily ever after. However, when we are really faced with reality such as with the blind and deaf we adjust our teaching-learning approaches. Much more needs to be done strengthening the strengths of students in general and learning disability students in particular. For example, since the learning disability college student tends to be a speaker-listener in a reader-writer environment, the tape recorder should become a constant companion. However, most learning disability adults do not understand the use of this adaptive instrument at all.

In remediation with learning disability adults one finds a number of specific accommodations they have made to their disabilities to be grossly inefficient in terms of time and results when they face the challenge of a college environment. To remedy some of this does not merely mean acquiring better study habits, but could mean the construction of a whole treatment program. Selling a better way to do a task to a learning disability adult means also dealing with the possible recurrence of anxiety which any sort of change can bring about. Such improvement strategies need to be so carefully planned and executed.

Counseling is the frame of reference within which the other functions of assessment, remediation, intervention and coordination take place. The anxiety level is so high among most learning disability adults that it has to be constantly considered. For example, very little verbal reinforcement in a remediation session can mean negative reinforcement to the adult concerned. The upshot is that the adult does not appear for the next appointment. Another factor is uncovering the outmoded approaches mentioned above. This can be quite psychologically threatening. "Breaking cover" to seek help for one's disabilities can be fraught with emotional connotations on the part of the learning disability adult. The adult constantly seeks psychological proof that it has been worth it to break cover. A period of counseling may have to be considered to help give the learning disability adult confidence to even begin remediation sessions. This counseling support is a necessity during the period of treatment.

Sometimes the anxiety is so great that it is like the old chicken or egg argument, which came first, the learning disability or the anxiety. They feed each other and the confusion can grow quite complex. That is why the counseling in the full sense of the word is needed to the extent it is. The struggle of the learning dis-

ability adult not to be "different" can raise obstacles in the path to learning improvement. Helping them understand that struggle is a continuing counseling goal.

The fourth function, that of intervention, is consulting with people important in the learning disability adult's life such as instructors, parents, wife or husband, etc. The emphasis is on the instructor within the university environment, but work with the others in terms of expectations and actual ways of helping is very important also. College professors as a whole do not understand learning disability students. They suspect them of shirking their student responsibilities if they try to discuss other modes of learning than that which is being used in class; for example, an oral examination instead of an essay one. However, most college instructors upon gaining a better understanding of this type of student are most cooperative because they are concerned about their students' welfare. The clinician acts as an interpreter for the learning disability student but may become a mediator if the situation demands it. Sensitizing faculty through informal talks, workshops, films etc. to common traits of learning disability students becomes important also for all those students who are not prepared to break cover.

The fifth function is that of coordinating the learning activities of a learning disability student. The learning disability adult can become his/her own worst enemy in terms of program planning, tutor help, time management, referral, etc. The clinician supervises subject matter tutors who might be utilized, acts as referral facilitator to campus and outside agencies which might be of help, helps plan approaches to study times and procedures, and helps the learning disability student seek courses which are in his/her present academic reach.

Because of the multiple functions considered necessary for a person to work with learning disability adults, I feel such a person should be called a learning coordinator. The term, clinician, tends to imply a restricted, clinical approach where coordinator means a holistic approach to learning utilizing all resources available in campus and community rather than just within the clinic.

Additional reflections

This writer sees the need for small supportive/learning groups that are on-going for the learning disability adult. This approach can be difficult to formulate because learning disability students have been in isolation in regard to their disabilities. They are amazed that other people might have disabilities because they think of themselves as unique. In fact when they break cover they see it only in terms of their getting help for themselves. The idea that they might share their problems with others, thereby gaining greater understanding and information for themselves as well as giving information to help others, tends to be mind boggling. Along with this is the feeling that they may be willing to share their disabilities with a couple of people but they are not going to tell a whole group. I believe that this sharing is very important in the treatment process because of what I noted above--that the learning disability adult is his/her own best resource.

Another aspect I see is that we expect steady progress once the student breaks cover and embarks upon a program of improvement, adaptation, etc. Because there has been so much self doubt instilled in the learning disability adult over the years, we have to expect some real ups and downs in regard to their continuing progress. The doubts are always just under the surface. However, the opposite can happen also. A little progress can bring about euphoric feelings after years

of feeling down. Unrealistic goals might then be considered and the handling of this situation, helping the person return closer to reality, becomes a most delicate one.

Another thing to be remembered about these students is that they have survived, and in surviving, many of them have become excellent manipulators. Their coping skills are usually more sophisticated than those of most of us. Because of this they get into the habit of getting other people to carry the learning load if at all possible, such as with subject matter tutors. This needs to be watched carefully because some of them go too far in this dependency relationship with those who help them. What happens is the independence that they are actually seeking is not gained because they are busily reinforcing their own dependency.

Because they have developed good survivor skills they have had to go against their own moral code. At times they have had to lie and cheat in order to survive. This can cause numerous guilt feelings and conflict can be ever present. This constant conflict needs to be talked out frequently to relieve some of the anxiety engendered from it. I have jokingly told some of them as we exchanged learning disability stories that if I were leader of a support/learning group for a year, I would be able to write a best seller about how to get around the institution of education.

Learning disability adults at the four year college level tend to be older than the average in regard to expected age at college level. In our sample all have taken longer to accomplish the academic hurdles. Most have come through the community college, some with special help and others on their own. The grade record is spotty depending upon what subjects fit their learning strengths and weaknesses. For some, working full time after high school has been important. They needed a few years to gain perspective in the real world. The academic world had been one which had given quite a bit of pain.

I am most impressed by the tremendous drive these people have to succeed in the academic world in spite of the many barriers they face. I am most sincere when I tell them that I admire their guts.

Critical Incident Samples

1. Accountability Statement

Student X should increase her self-confidence in seeking and maintaining friendships.

Critical Incidents

Student X joined a study group. While the group was not effective for her from a studying point of view (Student X has a problem with auditory figure/ground and was unable to work well in a discussion group this large) the group was a success experience for her socially. She felt good about the contacts she had made and felt good about her own contributions.

Following the successful experience with the large study group, Student X initiated study sessions with individuals on several occasions. While Student X is always ready to help when someone else needs something, it is unusual for her to initiate contacts for getting her own needs met. These were successful experiences for her and resulted in friendships outside the school setting.

2. Accountability Statement

Student Y will manifest improved social skills in new situations. In particular, Student Y will learn to use assertive responses in conflict situations after role playing and modeling in counseling situations.

Critical Incidents

Student Y is not able to act assertively in conflict situations. He reports extreme discomfort in such situations, including increased heartbeat, sweaty palms, and difficulty maintaining his composure. Such discomfort accompanies imagining conflict situations. His usual modes of coping are to placate, give in immediately, and to extract himself from the situation as quickly as possible.

A roommate was six weeks behind on the rent. Student Y used his newly acquired assertive responses to insist on a plan for payment. The roommate made the first two installments and failed to make the third. When payment had not been made in an agreed upon time, Student Y moved the roommate's belongings from the apartment and got a new roommate. The original roommate finally did pay the back rent.

3. Accountability Statement

Student Z should learn to use the tape recorder to dictate papers.

Critical Incidents

Student Z shows considerable strength in using the speaker/listener approach to learning. Writing is difficult for Student Z, but he is an articulate speaker.

Dictating was effective in composing written discourse. Transcribing is a problem as it is difficult for Student Z to listen and type at the same time. He is becoming more proficient at this skill. He also developed a compensatory skill on his own. Student Z is well versed in the use of computers and developed a word processing program that enables him to make sentence and spelling corrections more effectively in order to obtain an error free copy.

APPENDIX C

VISUAL DYSFUNCTION AND DYSLEXIA

A NEW FUNCTIONAL DISORDER

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ABSTRACT

Evidence is presented to support the existence of a previously unrecognized functional disorder of the eye and its relationship to dyslexia. Forty-nine subjects with dyslexia were diagnosed as having an ocular abnormality that appears to lie in the neural transmimssion system between the photoreceptors and the brain. Symptoms of this new syndrome (impaired visual resolution, impaired depth perception, ocular vertigo and decreased peripheral vision) were found to be nontreatable by standard ophthalmological means.

There is no single established cause for dyslexia and other related learning disabilities despite a multi-disciplinary approach from the fields of medicine, education and psychology. To date the etiology and symptoms of dyslexia remain poorly understood. Present treatments have proven ineffectual, leaving the learning disabled individual impaired for life. Dyslexic impairments in children and adults substantially interfere with their ability to adapt to formal education and in addition have life-long social and economic implications(1). This paper presents preliminary data suggesting the existence of a visual dysfunction which may be linked to dyslexia.

Current Theories

A review of the literature suggests that a relationship exists between dyslexia and perceptual impairments in general. Long term studies of students with reading disabilities have found that the perceptual process is the largest single etiological factor involved in reading impairments (2,3,4,5,6). However, researchers have been unable to pinpoint any visual dysfunction that hampers the perceptual process in dyslexic individuals (7,8,9,10).

The most recent policy statement of the American Academy of Ophthalmology (January, 1982) states that the evidence does not support any claim for improvement when treatment is directed at remediation of these specific ocular dysfunctions using visual training, including muscle exercises, ocular pursuit or tracking exercises (11). Excluding correctable ocular defects, glasses (with or without prisms) have thus far been found to have no value in the specific treatment of dyslexia (12). Therefore recent research into dyslexia has refocused its attention in a new direction toward biochemical, genetic, physiological and structural brain changes (13). Dyslexia is currently believed to be a structural brain defect involving the central nervous system (14).

In contrast to current theories, research being conducted at California State University, Long Beach (CSULB) has yielded results that redirects attention back to a specific visual dysfunction as a major factor in dyslexia. In the past visual dysfunctions have been limited to refractive errors of the eye, muscle imbalance, and vergency and accommodative difficulties. This article explores a dysfunction that occurs once the image has been focused on the retina. This specific visual dysfunction may arise from abnormalities in the neural transmission of visual stimuli. Past research in the area of photoreceptors has assumed that the discrete character of the receptor cells results

in stability of discharge rate and absorption of light (15). This investigator hypothesized that in certain subjects the discharge rate of the receptor cells is subject to random variations causing visual oscillations and fluctuations in the number of light quanta absorbed. Based on this premise the investigator conducted research where the spectral band was reshaped in subjects with visual dysfunctions such that the magnitude of specific wave lengths was reduced below 40%. Substantial changes in visual resolution, depth perception and peripheral vision were achieved.

Methodology

The present research was conducted using 27 students at CSULB who were referred to the Adult Learning Disability Program and qualified as learning disabled by state and federal guidelines. These students ranged in age from 18 to 49 years of age. Six were males and 21 were females. An additional population consisting of 40 clients who had been referred to the Perceptual and Learning Disability Clinic of Long Beach were also tested for perceptual impairments. The clients were referred to the clinic complaining of eye strain, headaches, clumsiness, photophobia and various learning problems including reading difficulties. Their ages ranged from 9 to 54 years of age. Of this population 14 were males and 26 were females.

All the subjects were administered the Irlen Differential Perceptual Schedule (IDPS) to determine if the visual dysfunction of scotopic sensitivity existed (16). The IDPS consists of questions which identify the various symptoms of this syndrome which is manifested in four condititons: reduced visual resolution, impaired depth perception, ocular vertigo and impaired peripheral vision. Impaired visual resolution manifests itself in the distortion of the clarity and stability of the outline of visual units (letters, numbers or musical notes).

The first section of the IDPS concentrates on problems of ocular vertigo, depth perception and symptoms of eye strain. The primary emphasis of the second section is to delineate the specific symptoms of impaired visual resolution as they appear in the reading process. Section three explores the specific breakdowns in visual resolution as they affect handwriting, written composition, mathematical calculations and reading music. Finally, eye strain and focusing ability are measured in terms of near point vision, midpoint vision and far point vision. The number of "yes" responses on the IDPS provides a directional measure for determining whether or not the treatment is

likely to be successful. It has been found that 95% of the subjects who answered yes to 30% or more of the questions responded to treatment.

Those subjects who received scores of 30% or greater on the IDPS were required to have an ophthalmological examination to rule out eye pathology and refractive errors as the cause of the dysfunction. Treatment was never prescribed as a substitute for refractive lenses and a consulting ophthalmologist found subject symptoms to be nontreatable by standard ophthalmological means. Those subjects already wearing glasses were required to have an ophthalmological examination to rule out changes in vision and determine whether there were any undiagnosed treatable conditions. The examinations included the standard battery with the addition of tests for vergency reserve, fusion and depth perception.

After receiving an opthalmological examination and necessary changes in prescription, the subjects scoring 30% or greater on the IDPS were prescribed the newly developed photopic transmittance lenses (17) which attenuate only specific frequency bands predetermined to be causing the difficulty. These lenses are designed to reduce the stimuli at specific wave lengths in order to modify or reduce the random variation in the responses of the photoreceptors. The tints and optical densities found to be optimal for symptomatic relief differed among the subjects and in a few cases the density differed from the right eye to the left eye of the same individual. It should be noted that this treatment is remedial and that the photopic transmittance lenses must be worn to achieve beneficial effects. No permanent correction has been attained to date.

Immediately after placement in photopic transmittance lenses, the subjects were readministered the IDPS to measure changes in visual resolution. After the subjects had worn the glasses for one month, they were interviewed to determine whether changes in performance levels in reading, penmanship, eye strain, attention and concentration, and eye-hand coordination had occured.

Results

Of the original 27 students from CSULB diagnosed as learning disabled, 21 students (78%) received scores of 30% or higher on the IDPS and were categorized as having a visual dysfunction affecting their learning. Of the 40 clients studied from the private clinic, 28 clients (70%) received scores of 30% or greater on the IDPS indicating a perceptual impairment. For both groups, numbering 49, reading problems consisted of difficulty with sustained

concentration, slow reading rate and poor comprehension.

Prior to treatment most of the subjects reported that they were able to sustain reading for periods of only 15-20 minutes before experiencing eye strain and frustration. With the addition of photopic transmittance lenses this period was extended to two to three hours. There was an increase in the ease and extent of sustained focus resulting in the disappearance of most symptoms of eye strain such as headaches and red watery eyes.

For all subjects visual resolution and range of focus improved. Range of focus is defined here to mean near point visual range as focusing on a printed page. Consequently there was a substantial reduction in compensatory responses of the eye (regressions, blinking and squinting). In addition there was a subsequent improvement in reading rate. In the case of one client the reading rate increased from 63 words per minute to 117 words per minute with no additional remediation besides the introduction of photopic lenses.

Of greatest impact was the change in ability to comprehend the visual symbol. Prior to treatment the subjects all reported that they were unable to comprehend textbook material unless they read the same material three to five times. Five subjects required readers or recordings for the blind in order to adequately function in college. With the addition of the photopic lenses they were able to comprehend material on the first or second reading.

Improvements in sustained concentration, reading rate and comprehension are attributed to the removal of specific problems in visual resolution and focusing achieved by the introduction of photopic transmittance lenses. Changes were also reported through individual interviews in the areas of depth perception, peripheral vision and ocular vertigo. Certain people with dyslexia have problems stabilizing an image, focusing, seeing equal and adequate spacing between letters and words or perceiving equal shading of the visual units. Attempting to describe this condition, one patient stated that a written page appeared as though "a jar of ants had been spilled upon it."

Table I refers to the 49 subjects who experienced the symptoms of scotopic sensitivity and the number who fell into each of the five major conditions. All 49 subjects demonstrated problems in visual resolution. Seventeen subjects registered responses in more than one sub area (A-D). For example, for some subjects the letters not only had halos but also pulsated. As a result of treatment 100% of the 49 subjects reported a reduction in symptomology but five cases reported only partial remission. For example, one subject reported that

she originally saw three to eleven images per letter but that with the use of photopic lenses she saw only one image with a slight halo around each letter.

Thirty-eight subjects reported evidence of depth perception enhancement such that faces had contours, objects in the background receded and curved surfaces had depth rather than being flat. Possibly due to improved depth perception, greater facility in eye-hand coordination needed for cutting, penmanship and sports was reported by many subjects.

Ocular vertigo, or a sense of dizziness, was experienced by 25 subjects while walking. They likened the condititon to a sense of sea sickness. This condition was eliminated for all 25 subjects.

Impaired near point visual range is defined here to mean a type of tunnel vision where a subject can see only a small portion of a printed page. It was not unusual for a subject to report that only two or three letters of a word were in focus and the rest of the page was a blur. Photopic lenses increased the focal area dramatically for many of the subjects such that now 16 letters were in focus. For 15 subjects outer portions of the page were still blurry when focusing on the center of the page.

Of the 49 subjects who were diagnosed learning disabled 18 scored less than 30% on the IDPS. Although these 18 subjects were categorized as not having visual processing problems, they were still placed in photopic transmittance lenses and readministered the IDPS. These subjects reported no change in visual resolution, depth perception or peripheral vision.

Discussion

Further investigation of the importance of both the rods and cones in detailed vision is needed in order to explain the exact nature of the relationship of the photoreceptors to visual resolution, depth perception, peripheral vision and ocular vertigo. However the effects of the photopic lenses in easing the symptoms of this syndrome are encouraging. The lenses seem to modify the variable discharge and absorption of the photoreceptors in about eighty percent of the dyslexic population studied.

The question arises whether the same incidence of this functional disorder occurs in the general population. As with many functional disorders the severity of the disorder determines the degree of disability. In the case of scotopic sensitivity syndrome, the mildest symptoms manifest themselves in eye strain, headaches and increasing difficulty in maintaining focus over a sustained period of concentration. These people will often complain that they

read slowly. This slowness arises from their need to bring each word into focus individually. For these people the impaired visual resolution is a hindrance but does not actually impede comprehension. With increased impairment of resolution the ability to maintain sustained attention and comprehension becomes more difficult. In the more severe cases such as those upon which this study is based, the visual resolution is so impaired that the individual is unable to receive meaning from the printed page without great effort and it is at this point s/he becomes labeled dyslexic. Perception in reading must precede comprehension. Thus impaired perception of the visual units intrudes upon the capacity for meaningful reading. Major studies of this visual dysfunction and the proposed treatment are needed before the number of people that can be helped can be truly estimated.

TABLE I

Results of Treatment in 49 Subjects With Scotopic Sensitivity

Symptoms of Scotopic Sensitivity		PRE	POST
I.	Impaired Visual Resolution		
	A. Halos, shadows surrounding letters	32	5
	B. Vertical stretching of letters	6	1
	C. Vibration, pulsation of letters	28	3
	D. Unequal shading of letters	3	0
II.	Impaired Depth Perception	38	0
III.	Impaired Peripheral Vision	42	8
IV.	Ocular Vertigo	25	0
V.	Impaired Near Point Visual Range	49	15

References and Notes

1. Board of Directors, AAPOS and AAO, Ophthalmology Times, 7, 1 (1982), pp. 10-11.
2. E. A. Taylor, The Fundamental Reading Skill (Charles C. Thomas, Springfield, 1966).
3. S. Krippner, Paper read at Workshop on Reading Research, Washington, D.C., 1966.
4. R. V. Shearer, J. Pediatr. Ophthalmol., 3, 4 (1966), p. 47.
5. G.D. Spache and C.E. Tillman, Journal of Developmental Readings, 5, 3 (1962), p. 103.
6. W. Morse, F.A. Ballantine, and W.R. Dixon, Studies in Psychology of Reading, (Univ. of Michigan Press, Ann Arbor, 1951).
7. N. Flax, J. Learn. Disabil., 1, 9 (1968), p. 551.
8. H.K. Goldberg and P.W. Drash, J. Pediatr. Opthalmol., 72, 5 (1968), pp. 11-24.
9. Board of Directors, AAPOS and AAO, Ophthalmology Times, 7, 1 (1982), p. 10.
10. I. Suchoff, J. Learn. Disabil., 14, 10 (1981).
11. Board of Directors, AAPOS and AAO, Ophthalmology Times, 7, 1 (1982), p. 10.
12. Board of Directors, AAPOS and AAO, Ophthalmology Times, 7, 1 (1982), p. 10.
13. Univ. of Miami, Medical World News, 21, 26 (1980).
14. J.W. Bettman Jr., E.L. Stein, L.J. Whitsell, and H.F. Gofman, Arch. Ophthalmol., 78, 6 (1967).
15. Gerald Leisman, Basic Visusal Process and Learning Disabilities (Charles C. Thomas, Springfield, 1976), Chapter 9.
16. Request for copies of IDPS should be directed to this author c/o School of Education, CSULB, Long Beach, California, 90840.
17. Patent Pending #410045.

18. I would like to thank Donald Serafano, M.D., for examining a majority of the subjects included in this study.

PROPOSED RESEARCH FOR SCOTOPIC SENSITIVITY

Although the perceptual process is considered by many to be an important etiolotical factor in reading impairment, researchers have been unable to pinpoint any visual dysfunction that hampers this process in individuals having dyslexia. Since research in vision has not proven fruitful, recent research has focused on the areas of biochemical, genetic, physiological and structural brain changes as being more productive.

In contrast to current theories, preliminary research being conducted at California State University, Long Beach (CSULB) has yielded results that redirects attention back to a specific visual dysfunction as a major contributing factor to dyslexia. This dysfunction seems to occur before the image reaches the brain. Preliminary research has shown that by the use of specially designed lenses which reshape the spectral frequency of the stimuli the symptoms are greatly reduced or eliminated.

Clients with this new functional disorder which we are calling scotopic sensitivity usually go undiagnosed and receive no relief from their symptoms. The primary symptoms of this functional disorder are:

impaired visual resolution
impaired depth perception
impaired peripherial vision
ocular vertigo
difficulty with sustained focus

The visible outcomes of these problems are: (1) headaches, (2) eye-strain, (3) poor focus or sustained focus, (4) slow reading rate, (5) difficulty with sustained attention and concentration, (6) difficulty obtaining meaning from the printed page.

Of equal significance are the perceptual impairments of impaired peripheral vision and impaired depth perception. The patients actually: (1) perceive objects as being at a greater distance, (2) have great difficulty ascertaining the distance of moving objects, (3) cannot bring multiple objects into focus simultaneously, (4) cannot accurately judge distance of moving objects, (5) do poorly in sports requiring accurate depth perception, (6) do poorly driving a car such that they tailgate, hit curbs while parking, and avoid turning in front of oncoming traffic.

Finally, it is important to review the variety of areas affected by scotopic sensitivity syndrome. The perceptual dysfunctions occur at near, mid, and far point and thus can affect the client's ability to perform adequately in a large range of activities.

1. Reading
   a. Slow reading rate
   b. Poor comprehension
   c. Limited sustained attention and concentration
2. Composition
   a. Poor organization
   b. Difficulty with correct grammatical usage
3. Spelling
   a. Misspelling
4. Mathematics
   a. Poor computational skills on paper
   b. Sloppiness
   c. Difficulty with horizontal and vertical tracking
5. Music
   a. Difficulty with sight reading of notes
6. Art and Industrial Arts
   a. Difficulty with perspectives
   b. Difficulty with shadowing
7. Typing
   a. Difficulty keeping one's place
   b. Difficulty copying
8. Handwriting
   a. Difficulty staying on the line
   b. Poor penmanship
9. Sports
   a. Difficulty with activities requiring eye-hand coordination
   b. Difficulty with depth perception
   c. Difficulty with activities that have moving objects
10. Driving
    a. Difficulty in judging distance
    b. Tailgating
    c. Problems in parallel parking

d. Problems turning in front of oncoming traffic

e. Problems judging distance of oncoming traffic

Proposed Research - A

Preliminary research indicates the functional disorder of scotopic sensitivity exists in the general population. This disorder impedes learning in people from a minimal degree where they experience eye strain, headaches, and difficulty with sustained attention after five to fifteen minutes to extreme symptoms which manifest themselves in dyslexia and dyscalculia.

1. To study the incidence of scotopic sensitivity in the general population
2. To determine the effects of scotopic sensitivity on reading rate.
3. To determine the effects of scotopic sensitivity on reading comprehension.
4. To determine the effects of scotopic sensitivity on mathematical calculations.
5. To determine the effects of scotopic sensitivity on eye strain.
6. To determine the effects of scotopic sensitivity on sustained attention and concentration.
7. To determine the effects of scotopic sensitivity on penmanship.
8. To determine the effects of specially designed glasses to change reading rate.
9. To determine the effect of specially designed glasses to change reading comprehension.
10. To determine the effect of specially designed glasses to reduce or eliminate eye strain.
11. To determine the effect of specially designed glasses to increase sustained attention and concentration.
12. To determine the effect of specially designed glasses to improve penmanship.

Proposed Research - B

Preliminary research indicates that possibly 20% of the general population might have the dysfunction of scotopic sensitivity. For these people with scotopic sensitivity perception is affected by the variables of illumination and color of paper. Preliminary research indicates that perceptual dysfunctions increase with white paper and black print and decrease with the use of green paper with black print. Preliminary research indicates that perceptual dysfunctions increase under fluorescent lighting and decrease under natural lighting.

1. To determine the increase in perceptual disorders under various lighting conditions.

2. To determine the decrease in sustained attention and concentration under various lighting conditions.
3. To determine the increase in symptoms of eye strain under various lighting condtions.
4. To determine the increase in perceptual disorders using various background paper colors such as white, green, yellow, goldenrod, and pink.
5. To determine the decrease in sustained attention and concentration with the use of various background paper color.
6. To determine the increase in symptoms of eye strain with the use of various paper colors.

Proposed Research - C

Preliminary research indicates that people with binocular vision can suffer from impaired depth perception. Depth perception appears to be enhanced by shadows, coloring, and sharpness of outline. Those people who suffer with scotopic sensitivity have impaired depth perception.

1. To determine the extent that impaired depth perception exists in the general population.
2. To determine the extent that impaired depth perception correlates with impaired visual resolution and other symptoms of scotopic sensitivity.
3. To determine the extent that impaired depth perception affects eye-hand coordination activities.
4. To determine the extent that impaired depth perception affects judgement of distance.
5. To determine the extent that impaired depth perception affects judgement of moving objects.
6. To determine the effect of specially designed glasses to increase eye-hand coordination.
7. To determine the effect of specially designed glasses to increase the accuracy of judgement of distance.
8. To determine the effect of specially designed glasses to increase the accuracy of judgement of moving objects.

ADULT LEARNING DISABILITY PROGRAM

CALIFORNIA STATE UNIVERSITY, LONG BEACH

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SHARING OUR EXPERIENCE

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A NUMBER OF PEOPLE HAVE ASKED TO VISIT OUR PROGRAM. IN ORDER TO DO THE JOB WE THINK NECESSARY, WE HAVE SCHEDULED THE SAME TWO HOUR PRESENTATION FOR TWO FRIDAY MORNINGS, APRIL 16, AND MAY 14, 1982.

FROM 9:30 - 11:30 A.M. WE WILL SHARE WHAT HAS BEEN TRANSPIRING THIS YEAR THROUGH OUR GRANT TITLED, TESTING A MODEL FOR PROMOTING ACADEMIC SUCCESS OF LEARNING DISABLED STUDENTS AT THE UNIVERSITY LEVEL.

9:30 - 10:00	PROGRAM DESCRIPTION
10:00 - 10:30	LEARNING DISABLED STUDENTS AT CSULB - WHAT THEY ARE LIKE
10:30 - 11:30	DISCUSSION AND VIDEO DEMONSTRATION OF THE CLINICAL INTERVIEW (OR USING THE L.D. AS HIS/HER BEST RESOURCE)

IF YOU ARE INTERESTED, PLEASE CALL (213) 498-4430. IF THE SECRETARY IS NOT AVAILABLE, LEAVE YOUR NAME, ADDRESS, AND PHONE NUMBER ON THE ANSWERING MACHINE, AND WE WILL SEND YOU DIRECTIONS ON HOW TO REACH OUR MEETING PLACE AND WHERE TO PARK.

R.J. SWAN, DIRECTOR
HELEN IRLEN, LEARNING DISABILITY SPECIALIST

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Educ. Psych. 590 Learning Disabilities at the Post-Secondary Level
Tues/Thurs 5:00 - 8:30p.m. June 22 - July 29
Three semester units $189.00

This course is aimed at those people who are working with (or wish to do so) college students in helping to lessen learning barriers in processing skills. Emphasis will be placed on a counseling model as a necessary support system. Classroom activities will include the teaching of specialized interviewing skills with emphasis on continuing diagnosis and utilizing the client as his/her own best resource.

Focus will be on awareness but with demonstration and participation by class members. The areas to be covered include:

1. characteristics of the learning disabled adult;
2. alternative methods of identifying, differentiation, and treatment of problems in reading, writing, spelling, and listening;
3. alternative treatment procedures for social and personal problems;
4. academic and career counseling, and learning strategies needed in a college setting.

Prerequisites include some course work and/or experience in special education or reading or school psychology or counseling. For additional information call the Adult Learning Disability Program at (213) 498-4430 or write Helen Irlen, School of Education, California State University, Long Beach 90840.

For registration information, call (213) 498-5561 or write for a Summer Session Bulletin to Summer Session Office, California State University, Long Beach 90840.